

FUNCTIONAL RECOVERY IN PATIENTS WITH ATHEROTHROMBOTIC STROKE

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Introduction and Purpose: The study's aim was to evaluate factors which influence patients with atherothrombotic stroke due to atherosclerotic carotid stenosis (ACAS) functional recovery.

Methods: We measured insulin-like growth protein (IGF) family serum levels in patients with acute atherothrombotic stroke/TIA with 50-99% ACAS during the first 3 days after vascular event (group 1), patients with severe ACAS with history of vascular events during more than 2 month before enrollment (group 2), patients with ACAS without history of stroke or TIA (group 3) and healthy volunteers. As the primary endpoint of study was chosen modified Rankin scale (mRs) at 90 days from inclusion in the study.

Results: We identified 75 patients for group 1, 25 patients for group 2 and 24 patients for group 3. 24 healthy volunteers comprised the control group. Age range was 50-80 years.

In patients with ACAS there was a negative correlation between IGF-2 ($\tau = -0.232$, $p = 0.046$) with mRs and a positive correlation of IGF-1 ($\tau = 0.219$, $p = 0.021$) with mRs. ≥ 1 point from baseline level mRs level decrease at 90 days from inclusion was assessed as positive dynamics, mRs level increase ≤ 1 point from its baseline level - as negative dynamics. Disability increase was more frequent in ACAS patients both with baseline mRs = 0-1 or 5 and with initial NIHSS < 7 or ≥ 14 ($p < 0.05$), and in patients elder than 75 years ($p < 0.05$) and with coronary artery disease ($p < 0.05$). Disability degree decrease was associated with the follow-up medical observation and quitting smoking ($p < 0.05$).

Conclusion: IGF-activity inhibition in patients with ACAS is associated with their larger disability degree. Baseline disability degree, stroke severity, age, ischemic heart disease, medical observation and smoking quitting influence their on the functional recovery of these patients.